Faxing On The Internet

BY KEVIN M. SAVETZ

Internet users are tinkerers by nature. The 'net wouldn't be possible without thousands of ingenious hackers around the world, tinkering away to blend a copious hodgepodge of computers, people, and appliances. These great minds have brought us such fine artistry as the Internet Toaster, a variety of 'net-linked vending machines, even dial-a-Bible-verse. Many of these tools are useless and many are fun, and occasionally someone tries doing something useful.

In the "something useful" category, a creative group of people has plugged its fax machines into the Internet for "an experiment in remote printing." The experiment is a good hack, allowing Internet users to send faxes via electronic mail. It works simply enough—send electronic mail to a special address, and soon after (if your recipient's fax machine is in an area covered by the service) out comes a freshly minted fax. This service is free—it doesn't cost the sender a penny to send a fax. The recipient is only out the cost of a sheet or two of fax paper.

The experiment is the brainchild of Carl Malamud (the creator of Internet Talk Radio) and Arlington Hewes. They're doing research on how to integrate special-purpose devices (like facsimile printers) into the fabric of the Internet. The service is currently free, but the creators are investigating ways to help the organizations recoup the cost for sending faxes.

HOW DOES IT WORK?

A variety of companies, institutions, and citizens linked to the Internet have joined the experiment by linking a computer and fax modem to the 'net. When an organization joins the remote-fax service, they specify what areas they are willing to send faxes to. In most cases, an organization will allow faxes to be sent to any machine that is a local call from their fax server.

When you send an email fax message, you (naturally) must include the phone number of the recipient's fax machine. A computer looks at the phone number and decides if any participating fax machines cover the area you want to fax to. If so, your message is routed to the appropriate machine. Otherwise, you will receive electronic mail with the disappointing news that your fax couldn't be delivered.

WHO'S FAXABLE?

Can you send a fax anywhere? Well, no. The experiment only began in July, so only a smattering of participants have enlisted their fax machines in the quest to send outgoing messages from total strangers to other total strangers. As of early November, you can send faxes to all of Australia; Washington, DC; big chunks of Central California; some of Southern California; and parts of Michigan, Massachusetts, and New York. (See sidebar for complete coverage information.)

More locales will be faxable soon, including more parts of the United States, Denmark, Finland, Ireland, Japan, and Sweden.

SENDING A FAX

To send a fax over the Internet, compose an email message. The body of the message should contain the contents of your fax message. The TO: line is the most important part of your email, because it must contain the phone number of the recipient's fax machine as well as the recipient's name.

The TO: line should look something like this:

TO: remote printer.Arlington_Hewes/Room_403@0.1.5.2.8.9.6.5.1.4.1.tpc.int

To the left of the @ symbol, you must include the identity of the recipient. The words "remote-printer" tell the fax server the type of access. (In this case, faxing or remote printing.) Because some mailers have difficulty dealing with addresses that contain spaces, you should be very careful as to what characters you use to identify the recipient. It's safest to use upper and lower case letters, digits, the _ and the / character. When the fax cover sheet is generated, the _ will turn into a space and the / will become a line break. So, the above address would generate a cover sheet like:

Please deliver this facsimile to: Arlington Hewes Room 403

The mess of numbers to the right of the above example identifies the telephone number of the remote fax machine. Exchanges must be specified by country code and phone number. This means you must specify the country code, then the phone number of your victim. If you're sending to a machine in the US, this just means you need to send a 1, the area code, and the phone number. Now, reverse the string of numbers (that's right, reverse them. Don't ask me why this step is necessary. What are computers for, after all?), put periods between them, and add the Internet domain ".tpc.int". Whew!

So, to send a fax to Mr. Hewes, at 1-415-698-2510, your email would be **TO: remote-printer.Arlington_Hewes/Room_403@0.1.5.2.8.9.6.5.1.4.1.tpc.int**

You can send a fax to multiple fax machines, or even a combination of faxes and traditional email recipients. After the deed is done, you will receive electronic mail telling you if your fax was successfully sent or not.

FOR MORE INFORMATION

For a copy of the Frequently Asked Questions list on faxing from the 'net, send mail to "tpc-faq@town.hall.org" and you will automatically receive the FAQ via email. The FAQ also covers advanced topics like using MIME to send fancy formatted text or graphics, and how to operate a fax server.

Fax sites are being added to the network on a regular basis—for a current list of faxable areas, send email to "tpc-coverage@town.hall.org". There is also a mailing list for discussion of the fax service and its implementation. To join, send a request to "tpc-rp-request@aarnet.edu.au".

If you have a question for an administrator that isn't covered on the FAQ or general mailing list, send email to Arlington Hewes at "tpc-admin@town.hall.org". ■

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